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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,944	07/16/2001	John Ernest Hart	GJE-68	6466

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EXAMINER	
AFREMOVA, VERA	
ART UNIT	**PAPER NUMBER**
1651	

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/856,944	HART, JOHN ERNEST	
	Examiner	Art Unit	
	Vera Afremova	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,8,11-15 and 17-21* is/are pending in the application.

4a) Of the above claim(s) *15 and 17-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6,8 and 11-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 3-6, 8 and 11-14 as amended 9/10/2004 are under examination in the instant office action.

Claims 2, 7, 9, 10 and 16 are canceled. Claims 15 and 17-21 are withdrawn.

Claim Rejections - 35 USC § 102/103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-5, 8 and 11-13 as amended remain rejected under 35 U.S.C. 102(b) as anticipated by US 4,734,398 or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 4,734,398 as explained in the prior office action and repeated herein.

Claims are directed to an endogenous material or a composition that is obtained by steps of collecting an ovarian venous blood of female mammal post-oestrus, preparing plasma from the ovarian venous blood and partially purifying the material from the plasma to obtain fractions with molecular weights in the ranges 10-30 kD and/or 10-20 kD. The claimed composition is inducible in a post-oestrus female mammal by clomiphene and the claimed composition has ability to reduce mass of body organs including non-gonadal organs. Some claims are further drawn to the protocol of purifying the material centrifuging blood, using ion exchange chromatography eluted fractions with gradient of 0-0.3 M NaCl.

US 4,734,398 discloses a material having ability to reduce organ mass (col. 3, line 55-58 or col. 10, lines 47, 61-64), which is obtained from ovarian venous blood of human female patients including patients with regular menstrual cycles. Blood collection is done on days 12-14 after last menstrual period that is around ovulation period (col. 8, line 61). The material is

obtained by a process comprising steps of collecting an ovarian venous blood of female mammal (col. 8, line 63-65), preparing plasma from the ovarian venous blood by centrifugation (col. 9, lines 8, 18-19), partially purifying the material from the plasma by dialyzing with 10 kD exclusion membrane (col. 9, line 26), by chromatography and by washing with 0.5 M NaCl solutions (col. 9, lines 8-31). The patent teaches obtaining fractions with molecular weights in the ranges within 1-30 kD and/or 10-20 kD such as 12-15 kD, 14-18 kD, 22-25 kD that have capability of reducing organ mass or ovarian weight (col. 4, lines 19-21 and lines 27-31, col. 11, lines 52-54).

Thus, the cited patent US 4,734,398 discloses endogenous material or composition that is identical to the presently claimed material since the cited material is derived from the same source such as ovarian venous blood of a mammal, it has identical molecular weight such as 10-20 kD and it is said to have the same effect such as organ mass reduction as required for the claimed material. Furthermore, the starting material of the cited patent is collected about the period of ovulation and, thus, the final collected material is considered to be the same material that would have been induced by clomiphene within the meaning of the instant claims since clomiphene is a generic ovulation-inducing agent. Or, the starting collected material is considered to be the same regardless cycle timing of ovarian blood collection because the starting collected material would contains at least some amounts of the material(s) as intended whether it is collected during ovulation and post-oestrus. Consequently, the claimed invention is anticipated by the teaching of the cited patent US 4,734,398.

In the alternative, even if the claimed material and/or its fractions are not identical to the referenced material/fractions with regard to some unidentified characteristics such as related to

the protocol of purification including the use of a particular ion exchange chromatography columns or specific concentrations of NaCl, for example, the differences between that which is disclosed and that which is claimed are considered to be so slight that the referenced material and/or fractions are likely to inherently possess the same characteristics of the claimed material particularly in view of the same characteristics which they have been shown to share that are identical molecular weight, identical effects related to the weight reduction and identical source of isolation. Thus the claimed invention would have been obvious to those skilled in the art within the meaning of USC 103. Accordingly, the claimed invention as a whole was at least prima facie obvious, if not anticipated by US 4,734,398, especially in the absence of evidence to the contrary.

Claim Rejections - 35 USC § 103

Claims 1, 3-6, 8 and 11-14 as amended remain rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,734,398 as explained in the prior office action and repeated herein.

Claims 1, 3-5, 8 and 11-13 as explained above. Claims 6 and 14 are further drawn to the use of a sheep as source of mammalian ovarian venous blood for making claimed material.

US 4,734,398 is relied upon as explained above. The particular disclosure is related to human patients as source of mammalian ovarian venous blood for making materials of interest. Thus, the cited patent is lacking specific disclosure related to a sheep. However, the cited patent teaches that the disclosed material/fractions are proteins (col. 8, line 61 and col. 10, last line) and that the activity of the material is interspecies and that it is produced and effective for various mammals (col. 3, lines 29-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to obtain the claimed material/fractions from various mammals including mammals such as human and sheep with a reasonable expectation of success in obtaining material/fractions having same effects as related to organ mass reduction and as related to ovulation or clomiphene-induced ovulation within the meaning of the claims because activity of same or similar proteins is interspecies and the same/similar proteins and effects are produced in various mammals as taught and/or suggested by the cited patent. One of skill in the art would have been motivated to use various mammals including sheep as the source of therapeutically valuable materials for the expected benefits in maximizing amounts of the collected materials. Thus, the claimed invention as a whole was clearly prima facie obvious, especially in the absence of evidence to the contrary. The claimed subject matter fails to patentably distinguish over the state art as represented be the cited prior art. Therefore, the claims are properly rejected under 35 USC 103.

Response to Arguments

Applicant's arguments and declarations by Dr. John Ernest Hart and by Professor Iain James Clarke filed on 9/10/2004 have been fully considered but they are not persuasive as related to the presently claimed invention.

Applicant's arguments (response page 6-8) based on differences in source/time and production stimuli between claimed material and cited material are not found particularly persuasive because they are related to differences in the methods of making a product obtained by process of making. The final products made as presently claimed and as disclosed by the cited reference are considered to be identical since the final products have identical chemical structure

and biological function such as identical molecular weigh and ability to reduce organ mass. The applicant's material is claimed as a product-by-process. Since the Patent and Trademark Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make comparisons therewith, a lesser burden of proof is required to make out a case of prima facie obviousness for the product-by-process claims because of their peculiar nature than when a product is claimed in the conventional manner. MPEP 2113.

With regard to biological function Applicant argues (see response pages 9-12 and Declaration by Dr. John Ernest Hart) that the cited material {diZerega' compound or "FRP" as argued} does not produce an absolute organ mass loss and that there is no grounds for predicting/expecting loss in organ mass since "FRP" only suppresses response to gonadotropins. Nevertheless, the cited reference clearly teaches a "decrease in ovarian weight" (col. 10, line 48) upon administration of ovarian blood derived fractions with the same molecular weight as the claimed material. Thus, the disclosure of the cited reference falls within the scope of the presently claimed invention.

Applicant also argues that since the combined effect of gonadotropins and "FRP" primary relates to gonadal organs, there is no reasonable grounds to expect that the cited material {diZerega' compound or "FRP" as argued} would reduce non-gonadal organ mass as the applicant's "micrin" could or would. Although it might be true for chemical compounds established as "FRP" and "micrin", the chemical structure and the link between structure and biological function of the applicant's material is poorly characterized as claimed and as disclosed in order to distinguish the applicant's material from the material(s) as disclosed by the cited diZerega's patent. The only known fact or the only evidence is that structure (molecular weight)

of both materials is identical. Therefore, arguments based on some unidentified and/or undisclosed characteristics do not provide sufficient grounds for the evidence to the contrary to the claim rejection under 35 U.S.C. 102(b) as anticipated by US 4,734,398 or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 4,734,398.

The Declaration by Professor Iain James Clarke filed 9/10/2004 and arguments based thereon have been fully considered however they are not persuasive because materials or disclosure related to alternative source of isolation (brain tissue) and immunohistochemical characteristics of "micrin" are not within the scope of the instant claims. Moreover, these materials of the declaration do not find support in the as-filed specification in order to provide basis to distinguish the instant application and claims from the prior art.

The characteristics of the claimed compound and /or feature of the claimed invention such as being inducible by clomiphene and/or collection from post-oestrus female mammals do appear to be critical and distinguishable features of the claimed invention over the prior art since the prior art material is collected around ovulation time and, thus, it would be induced by clomiphene that induces ovulation and/or because the cited material(s) or materials with 10-20 kD would be present or collected in a least some amounts in female mammal post-oestrus or after ovulation.

No claims are allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Afremova whose telephone number is (571) 272-0914. The examiner can normally be reached from Monday to Friday from 9.30 am to 6.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached at (571) 272-0926.

The fax phone number for the TC 1600 where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Vera Afremova

AU 1651

November 22, 2004

V. Afremova

VERA AFREMOVA

PATENT EXAMINER